



FELD3002CIP1\_ST25  
SEQUENCE LISTING

<110> Feldmann, Richard J.

<120> Modifying the Control of Gene Expression Behavior by the Deletion of Connectrons and by the Design and Addition of Synthetic Connectrons in Prokaryotic, Archea and Eukaryotic Genomes

<130> FELD3002CIP1/ESS

<140> US 10/609,383  
<141> 2003-07-01

<150> US 09/866,925  
<151> 2001-05-30

<150> US 60/393,558  
<151> 2002-07-05

<160> 34

<170> PatentIn version 3.5

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<222> (12572)..(12788)  
<223> Chromosome = 1 Strand = positive Connectron Object Number = 36

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gcactggtaa caggtggttaa tgaagaagta atttcctgac ttgttggtgt actggttaaca 60  
ggtggtaatg atgaagtaat ttcctgactt gttgtgttac tggtaacagg tggtaatgaa 120  
gaagtaattt cctgacttgt tgttgactg gtaacagggtg gtaatgatga agtaatttcc 180  
tgacttggtt ttgtactggt aacagggtgt aatgatg 217

<210> 2  
<211> 236  
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<220>  
<221> misc\_feature  
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<223> Chromosome = 1 Strand = positive Connectron Object Number = 39

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ggtggtaatg atgaagtaat ttcctgactt gttgtgttac tggtaacagg tggtaatgaa 120  
gaagtaattt cctgacttgt tgttgactg gtaacagggtg gtaatgatga agtaatttcc 180  
tgacttggtt ttgtactggt aacagggtgt aatgatgaag cagtttcctg gcttgt 236

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<210> 3  
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 <221> misc\_feature  
 <222> (24863)..(25028)  
 <223> Chromosome = 1 Strand = negative Connectron Object Number = 112

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 gtcaggaaat tactttcttca ttaccacctg ttaccactac aaaaacgagc gaacaaacca 120  
 ctttggttac cgtgacatcc tgcgaatctc atgtgtgcac tgaatc 166

<210> 4  
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<220>  
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 <222> (4626130)..(4626166)  
 <223> Chromosome = 1 Strand = positive Connectron Object Number = 4651a

<400> 4  
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<210> 5  
 <211> 54  
 <212> DNA  
 <213> Escherichia coli k12 MG1655 complete genome

<220>  
 <221> misc\_feature  
 <222> (705150)..(705203)  
 <223> Chromosome = 1 Strand = negative Connectron Object Number = 811a

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<210> 6  
 <211> 36  
 <212> DNA  
 <213> Escherichia coli k12 MG1655 complete genome

<220>  
 <221> misc\_feature  
 <222> (757718)..(757753)  
 <223> Chromosome = 1 Strand = negative Connectron Object Number = 975

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<400> 6  
ttacgcctga tgcgctgcgc ttatcaggcc tacggg 36

<210> 7  
<211> 37  
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<223> Chromosome = 1 Strand = positive Connectron Object Number = 4651a

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<210> 8  
<211> 54  
<212> DNA  
<213> Escherichia coli k12 MG1655 complete genome

<220>  
<221> misc\_feature  
<222> (698713)..(698766)  
<223> Chromosome = 1 Strand = negative Connectron Object Number = 809

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<210> 9  
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<212> DNA  
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<223> Chromosome = 1 Strand = negative Connectron Object Number = 975

<400> 9  
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<210> 10  
<211> 16  
<212> DNA  
<213> Saccharomyces cerevisiae complete genome - problem

<220>  
<221> misc\_feature  
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<223> Chromosome = 2 Strand = positive Connectron Object Number = 792a

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<210> 11  
<211> 16  
<212> DNA  
<213> Saccharomyces cerevisiae complete genome - problem

<220>  
<221> misc\_feature  
<222> (221346)..(221361)  
<223> Chromosome = 2 Strand = positive Connectron Object Number = 793

<400> 11  
tattgcatgc tggatg 16

<210> 12  
<211> 539  
<212> DNA  
<213> Saccharomyces cerevisiae complete genome - problem

<220>  
<221> misc\_feature  
<222> (448454)..(448992)  
<223> Chromosome = 5 Strand = positive Connectron Object Number = 4749

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gcatctagga agtaaccttg tacgaaaata ggcaatattt cctgttttagg cgattgtgac 120  
gcagatttta gtccaacgat ctagcgtcaa ggaatttttt tatagtggga cattgcacca 180  
aggaagtaac ttgatacgtc gtgggtgaat ggggtctgttt tcttattcgg cggggtaata 240  
cattttttggg ggaagtttgt ctgtctgacg cgccatatgt aggtacgcca aaaagggtctc 300  
ctctacttcg aagcgcgagg tcgtatacct aataaggaaa tgtaatttat aactttttat 360  
tatattggtc ttttcgagag cggaacgtag gtccatgttt aaagtatcca agagaatatc 420  
cacgaagcgg ctgagcaacg aacagaatcc tggttctcct cgactaagca gatagttaag 480  
atactgtgca ccatggaaat tgaaaacgaa agtacgtacc gactacttta tttttgcag 539

<210> 13  
<211> 158  
<212> DNA  
<213> Saccharomyces cerevisiae complete genome - problem

<220>  
<221> misc\_feature  
<222> (24863)..(25028)  
<223> Chromosome = 5 Strand = negative Connectron Object Number = 4824a

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<400> 13  
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 gcatctagga agtaaccttg tacgaaaata ggcaatattt cctgttttagg cgattgtgac 120  
 gcagatttta gtccaacgat ctacggtcaa ggaatttt 158

<210> 14  
 <211> 134  
 <212> DNA  
 <213> Halobacterium sp. NRC-1 complete genome

<220>  
 <221> misc\_feature  
 <222> (732401)..(732534)  
 <223> Chromosome = 1 Strand = positive Connectron Object Number = 6612

<400> 14  
 ttcacacag acgaggacga ggcggccaa gtggggatcg gcacactcat cgtgttcac 60  
 gcgatggtgc tggtcgccgc gatcgccgcc ggcgtcctca tcaacactgc cggctacctc 120  
 caatccaagg ggtc 134

<210> 15  
 <211> 193  
 <212> DNA  
 <213> Halobacterium sp. NAC-1 complete genome

<220>  
 <221> misc\_feature  
 <222> (733018)..(733209)  
 <223> Chromosome = 1 Strand = positive Connectron Object Number = 6644a

<400> 15  
 gacgagcgcg gtcaagtggg gatcggcaca ctcatcgtgt tcacgcgat ggtgctggtc 60  
 gccgcgatcg ccgccggcgt cctcatcaac accgccggct acctccaatc caaggggtcg 120  
 gcaaccggtg aggaagcctc cgcacaggtc tccaaccgca tcaacatcgt ctccgcgtac 180  
 ggcaacgtca aca 193

<210> 16  
 <211> 85  
 <212> DNA  
 <213> Halobacterium sp. NAC-1 complete genome

<220>  
 <221> misc\_feature  
 <222> (773399)..(773483)  
 <223> Chromosome = 1 Strand = positive Connectron Object Number = 6852

<400> 16

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gtggggatcg gcacgctcat cgtgttcacg gcgatgggtgc tggtcgccgc gatcgccgcc	60
ggcgtcctca tcaacactgc cggct	85

<210> 17  
 <211> 121  
 <212> DNA  
 <213> Pseudomonas aeruginosa PA01, complete genome

<220>  
 <221> misc\_feature  
 <222> (4832718)..(4832838)  
 <223> Chromosome = 1 Strand = positive Connectron Object Number = 53464

<400> 17 gccaacatcg aggccctcaa cagccgcacg gtgaacatcg gccagatcct cgaagtgatc	60
aagggcatct ccgagcagac caacctgctc gccctcaacg ccgccatcga agccgcgcgc	120
g	121

<210> 18  
 <211> 194  
 <212> DNA  
 <213> Pseudomonas aeruginosa PA01, complete genome

<220>  
 <221> misc\_feature  
 <222> (4836528)..(4836720)  
 <223> Chromosome = 1 Strand = positive Connectron Object Number = 53531

<400> 18 ggacggcaaa caggtggtcg agcagaccat ccgcgcgatg aacgagcttt ccgagaagat	60
cagcgcctcc tgcgccaaca tcgaggccct caacagccgc acggtgaaca tcggccagat	120
cctcgaagtg atcaagggca tctccgagca gaccaacctg ctcgccctca acgccgccat	180
cgaagccgcg cgcg	194

<210> 19  
 <211> 169  
 <212> DNA  
 <213> Pseudomonas aeruginosa PA01, complete genome

<220>  
 <221> misc\_feature  
 <222> (4838678)..(4838846)  
 <223> Chromosome = 1 Strand = positive Connectron Object Number = 53549a

<400> 19 accatccgcg cgatgaacga gctttccgag aagatcagcg ctcctgcgc caacatcgag	60
gccctcaaca gccgcacggt gaacatcggc cagatcctcg aagtgatcaa gggcatctcc	120

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gagcagacca acctgctcgc cctcaacgcc gccatcgaag ccgcgcgcg 169

<210> 20  
 <211> 36  
 <212> DNA  
 <213> Sequence Recognized by Synthetic DNA Binding Protein

<400> 20  
 tcccatgag catagatatg caggtaggcg gcaagt 36

<210> 21  
 <211> 136  
 <212> DNA  
 <213> Vibrio cholerae chromosome I, complete chromosome

<220>  
 <221> misc\_feature  
 <222> (952641)..(952777)  
 <223> Chromosome = 1 Strand = negative Connectron Object Number = 607

<400> 21  
 tgtatatacc caaactactt ggagttgcag gtaggcggca agtgagtgag tcccatgag 60  
 catagataga ctatgtgatt ggggtgaacg aacgtagcca acaccgctgc agcttcaagt 120  
 aggaagggtg tacctt 136

<210> 22  
 <211> 117  
 <212> DNA  
 <213> Vibrio cholerae chromosome I, complete chromosome

<220>  
 <221> misc\_feature  
 <222> (1005810)..(1005926)  
 <223> Chromosome = 1 Strand = negative Connectron Object Number = 646

<400> 22  
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 cagactatgt gattggggtg aacgaacgta gccaataccg ctgcagcttc aagtagg 117

<210> 23  
 <211> 36  
 <212> DNA  
 <213> Sequence Recognized by Synthetic PNA

<400> 23  
 tcccatgag catagatatg caggtaggcg gcaagt 36

<210> 24  
 <211> 136  
 <212> DNA  
 <213> Vibrio cholerae chromosome I, complete chromosome

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<220>  
 <221> misc\_feature  
 <222> (952641)..(952777)  
 <223> Chromosome = 1 Strand = negative Connectron Object Number = 607

<400> 24  
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 catagataga ctatgtgatt ggggtgaacg aacgtagcca acaccgtgc agcttcaagt 120  
 aggaagggtg tacctt 136

<210> 25  
 <211> 117  
 <212> DNA  
 <213> Vibrio cholerae chromosome I, complete chromosome

<220>  
 <221> misc\_feature  
 <222> (1005810)..(1005926)  
 <223> Chromosome = 1 Strand = negative Connectron Object Number = 646

<400> 25  
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 cagactatgt gattgggggtg aacgaacgta gccaataccg ctgcagcttc aagtagg 117

<210> 26  
 <211> 15  
 <212> DNA  
 <213> Sequence Recognized by Synthetic Linked Pair of DNA Binding Objects

<400> 26  
 cccgacaaa cctgc 15

<210> 27  
 <211> 15  
 <212> DNA  
 <213> Sequence Recognized by Synthetic Linked Pair of DNA Binding Objects

<400> 27  
 cccgggggtc ccgag 15

<210> 28  
 <211> 64  
 <212> DNA  
 <213> Aeropyrum pernix k1 complete genome

<220>  
 <221> misc\_feature  
 <222> (284008)..(284070)  
 <223> Chromosome = 1 Strand = negative Connectron Object Number = 218

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cggc

64

<210> 29  
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 <212> DNA  
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<220>  
 <221> misc\_feature  
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 <223> Chromosome = 1 Strand = negative Connectron Object Number = 295

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 catgaaggca cggtttgggt gaacggctca taatcctctc gat 163

<210> 30  
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<400> 30  
 tagaggagta ccac 14

<210> 31  
 <211> 14  
 <212> DNA  
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<400> 31  
 atctcctcat ggtg 14

<210> 32  
 <211> 14  
 <212> RNA  
 <213> Synthetic Sequence

<400> 32  
 uagaggagua ccac 14

<210> 33  
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 <213> Synthetic Sequence

<400> 33  
 gugguacucc ucua 14

<210> 34  
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<400> 34  
aucuccucau ggug

14